

SOMATOCHLORA METALLICA ABOCANICA BELYSHEV, 1955, A NEW MEMBER OF THE EUROPEAN DRAGONFLY FAUNA (ANISOPTERA: CORDULIIDAE)

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Abstract — The Siberian *S. m. abocanica* is recorded for the first time in Europe, i.e. from SE Poland (Bieszczady Mts) and Finland (nr Raahe, Oulu Prov.). An identification key of the palearctic *S. metallica* group is presented, consisting of *S. metallica* with spp. *metallica*, *abocanica* and *exuberata*, *S. japonica* and *S. meridionalis*. A tentative hypothesis on postglacial range expansion of *S. m. metallica* and *abocanica* is discussed, the latter being perhaps a Mongol-Kasakhian faunal element. *S. japonica* is presumed a junior synonym of *S. m. exuberata*.

Introduction

The Siberian subspecies *Somatochlora metallica abocanica* was described by BELYSHEV (1955 [nec 1953, p. 50: nomen nudum]) from the Abakan River, Khakasskaya Prov., northern region of W Sayan Mts, Siberia, Russia. Even after its discovery, *abocanica* remained a somewhat enigmatic spp., hitherto known only from the Upper Yenisey and Altay region in Siberia. In later publications BELYSHEV (1968, 1973) altered the name occasionally, using "abacanica" instead. But on the basis of Art. 32a(ii) of the International Rules of Zoological Nomenclature, incorrect transliteration is not to be considered an inadvertent error. Belyshev never gave reasons for his change of name; consequently the use of "abacanica" should not be considered as unjustified emendation, but as an incorrect subsequent spelling (Art. 33b), which has no status under the Code.

Material and results

The palearctic *S. metallica* group consists of *S.*

metallica (Vander Lind., 1825) with spp. *metallica* ranging from central Siberia (Biya and Ob' Rivers) up to W Europe, *exuberata* Bartenev, 1910 (syn. *vera* Bartenev, 1911, syn. *coreana* Doi, 1938) from N Korea and E Siberia up to central Siberia (Baikal region), and *abocanica* from central Siberia (Upper Yenisey River, E Altay Mts and W Sayan Mts) and W Mongolia (Mongol-Altai Mts) to E and N Europe (SE Poland, Finland); *S. japonica* Matsumura, 1911 from Japan (Hokkaido), Sakhalin and the southern Kurile Islands; *S. meridionalis* Nielsen, 1935 from the Mediterranean.

The following material was examined:

- *S. m. metallica*: Several specimens in various collections from central and western Europe.
- *S. m. abocanica*: 1 ♀, 8-VIII-1948, Okunevaje Lake, Siberia, Russia, B.F. Belyshev leg., coll. ZMHB.
- 2 ♂, 3 ♀, 3/4-VII-1964, Bulgan River, Hovd Prov., Mongol-Altai Mts, W Mongolia, G. Peters leg., coll. ZMHB (cf. PETERS, 1985, sub *S. metallica*).
- 1 ♂, 17-VIII-1990, Vihanti Reservoir near Raahe, shore of Gulf of Bothnia, Oulu Prov., Finland, leg. et coll. m.
- 1 ♂, 6-VIII-1990, Wolkowyja, Bieszczady Mts, SE Poland, G. Mauersberger leg., coll. ZMHB.
- *S. japonica*: 2 ♂, 2 ♀, 6/12-VIII-1989, Siddy Lake, W Ochotskoje, Sakhalin, Russia, G. Mauersberger leg., coll. ZMHB.
- *S. meridionalis*: 2 ♂, Arethusa, Thessaloniki, Greece, SIO/IUCN-Exped. to S Italy and Greece, H. Lohmann, M. Schorr & K. Sternberg leg., coll. m.

These are the first records of *S. m. abocanica* from Europe. They show that this form is distributed much farther to the West than hitherto known.

The taxa of the palearctic group of *S. metallica* are to be differentiated by the following identification key:

- 1 Only two lateral yellow spots on the frons; fore legs completely black 2
- Transverse yellow band on lower parts of the frons connecting the two lateral yellow spots; fore legs partly yellow 3
- 2 Japan, Sakhalin and Kurile Islands *japonica*
- N Korea and continental Siberia *metallica exuberata*
- 3 Pyriform yellow spot on each side of pterothorax *meridionalis*
- No pyriform yellow spot on each side of pterothorax; different structure of male cerci 4
- 4 Pterostigma dark yellow to brown; adult wing bases with pale amber *m. metallica*
- Pterostigma deeply black; adult wing bases clear *metallica abocanica*

S. m. metallica is the only form without a deeply black coloured pterostigma.

Discussion

The recent discoveries of *S. m. abocanica* in Poland and Scandinavia raise some questions as to its range limits between Siberia in the East, and E and N Europe in the West. The range of *abocanica* in central Siberia indicates that it might be a Mongol-Kasakhian faunal element, originating from the Ektagian secondary glacial refuge (cf. LOHMANN, 1992, p. 436). The nominate form,

too, comes from a central Siberian dispersal centre; on the basis of our present knowledge, the West Siberian refuge (cf. DÉVAI, 1976) seems to be the most probable. Consequently, both spp. had undergone distinct postglacial westward range expansions, invading Europe as "migro-elements". This inevitably led to a secondary intergradation of both populations. More faunistic research is needed to define the actual ranges and status of *metallica* and *abocanica*.

In literature the East Asiatic taxa, *S. japonica* and *S. metallica exuberata*, are separated by their distribution rather than by any structural and colour peculiarities. Although the author did not see as yet any *exuberata* specimens, both taxa are in all probability conspecific, and *japonica* is a mere junior synonym of *exuberata*. If this is so, the latter must be ranked as a species because of structural differences from *S. metallica*.

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